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TECHNOLOGICAL BEHAVIOR ANALYSIS AND SOCIETAL IMPACT: A HUMAN SERVICES PERSPECTIVE

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Important research developments in applied behavior analysis stem from a variety of sources. Most pervasively, behavior-analytic research originates from institutions of higher education. A much smaller but nevertheless persistent set of developments results from the work of practitioners in nonacademic settings. The latter source of contributions not only plays a part in shaping the field of behavior analysis but also helps incorporate research advances made in academia into nonacademic settings (Reid, 1987). For the most part, the contributions made by behavior analysts working in nonacademic settings have occurred through technological research—research developing, refining, and applying behavior analysis technology.

The reason for the focus on technological research in contrast to other components of behavior analysis and, in particular, theoretically oriented research is primarily due to the employment contingencies under which behavior analysts operate in most nonacademic settings. Contingencies that support technological research in contrast to theoretical research are readily found in human services settings, a common employment site for behavior analysts not working in academia. The livelihood of the vast majority of behavior analysts in human services agencies is based on fulfilling clinical, supervisory, and/or administrative duties. Essentially none of the livelihood (from an income standpoint) stems from conducting applied behavior analysis research. Actually, research endeavors of behavior analysts in human services settings frequently have to be justified to administrative and related personnel in terms of the research not inhibiting service delivery. In many cases, the goal of such justification is not to obtain administrative support for research activity but is merely to avoid administrative prohibition of research endeavors. Nevertheless, a number of behavior analysts continue to conduct research in human services settings, presumably because they are convinced the research enhances service delivery as well as the professional field at large. Additionally, behavior-analytic researchers in human services agencies, like many researchers, are most likely to be reinforced by the personal and professional benefits of contributing research to their discipline. However, because the primary job of behavior analysts in the human services is that of clinician, administrator, and/or supervisor, the only type of research that can readily occur within the routine confines of what behavior analysts are paid to do is technological development, refinement, and application. To fulfill job responsibilities legitimately, behavior analysts in the human services generally can participate consistently in behavioral research only if the research is problem solving in nature, and is directed toward enhancing some aspect of a respective agency's service delivery. Behavior analysts usually cannot fulfill their job responsibilities by participating in theoretical research.

Thus, from a human services perspective, there is reason for strong support for the technological aspect of applied behavior analysis research. Of course, the analysis aspect must also be maintained to ensure effective technological developments and applications. At the same time, there is reason to disapprove of any movement to decrease the technological aspect in the field at large in order to increase the theoretically oriented aspect of applied behavior analysis. This disapproval stems not only from the rather idiosyncratic nature of the professional activities of behavior-analytic researchers in human services settings (as summarized above) but

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also from the technological contributions applied behavior analysis has made, and can continue to make, in the human services.

The beneficial impact of applied behavior analysis in human services is most readily apparent in the area of developmental disabilities. Applied behavior analysis has arguably affected the components of society associated with persons who have developmental disabilities more than any other societal components. In contrast to other societal areas in which behavior analysts struggle to make inroads, behavior analysis is not only routinely accepted and expected for developmental disabilities, it is in essence mandated. Governmental regulatory standards require various behaviorally based treatment regimes, and results of legislation and litigation have mandated numerous agencies to adopt behavioral treatment practices. A review of national advertisements for staff positions in developmental disabilities service agencies readily reflects the demand for individuals with skills in applied behavior analysis. In effect, applied behavior analysis has probably best fulfilled that part of its mission (Baer, Wolf, & Risley, 1968) concerned with societal improvement among those components of society associated with developmental disabilities. The possibility for applied behavior analysis to have such an effect was initiated primarily through the research and theoretical developments that gave birth to the applied behavioral approach in general. However, the effective application and unprecedented large-scale adoption of applied behavior analysis in developmental disabilities relative to other areas has been most directly a result of continued technological development, refinement, and application.

The preceding comments in support of technological research should not be taken as a nonsupportive reaction to theoretically oriented aspects of applied behavior analysis. The field would be severely short-sighted and, in effect, suicidal if there is not also support for a focus on theoretical conceptualization and corresponding research. The primary concern here, however, is that there should not be an intentional reduction of the technological focus by behavior analysts in order to expand the theoretical focus. The field currently is broad enough and the numbers large enough to support a focus on both the theoretical and the technological. Behavior analysts should continue to strive for the much-discussed but seemingly elusive goal of a true symbiotic relationship between theory and application; one should not be purposefully hindered in favor of the other.

In short, the manner in which applied behavior analysis has beneficially affected developmental disabilities demonstrates how technologically related research plays a necessary role in the field of applied behavior analysis. Even in the field of developmental disabilities, however, where the technological components of behavior analysis have been largely responsible for the most significant effects on society to date, the actual impact of behavior analysis is well below its potential impact. There is a serious gap in typical service settings between state-of-the-art services, as represented in the professional literature, versus existing services. Indeed, most people who work in developmental disabilities are not very well skilled, or skilled at all, in applied behavior analysis. There are also many unanswered questions in terms of how to optimize the quality of life for persons with developmental disabilities.

For applied behavior analysis to enhance further its impact on developmental disabilities and to come closer to its potential impact, several research directions are necessary. These same research directions would be beneficial for other areas of long-term technological research in applied behavior analysis and perhaps the field in general. First, the existing research approach to technological development, refinement, and application should continue and even expand to make a more comprehensive contribution to society. The technology has solved many problems and can solve many more, representing a contribution of applied behavior analysis that should not be diminished. Second, to enhance the contribution as well as to prevent the demise of technological research due to lack of societal reinforcement for technological research activity, a more concerted effort must be undertaken to address the adoption of applied behavior analysis as a dependent variable in research. Researchers

must evaluate means of increasing and maintaining competent use of behavioral procedures by a wider range of people in more, and in more diverse, settings. The latter point is not a new view in the field but nevertheless warrants emphasis. Relative to other epistemological strategies, applied behavior analysis has a tremendous ability to solve important problems. Perhaps working to resolve the adoption problem could serve as a point of synthesis and symbiosis between the theoretical and technological. Such a resolution, if thorough, will require all aspects of applied behavior analysis, from theory testing to refined technical replications. A move to deemphasize any of these aspects of applied behavior analysis will hinder the continued success of the field as a whole, and will certainly reduce the field's impact on improving the state of society.

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